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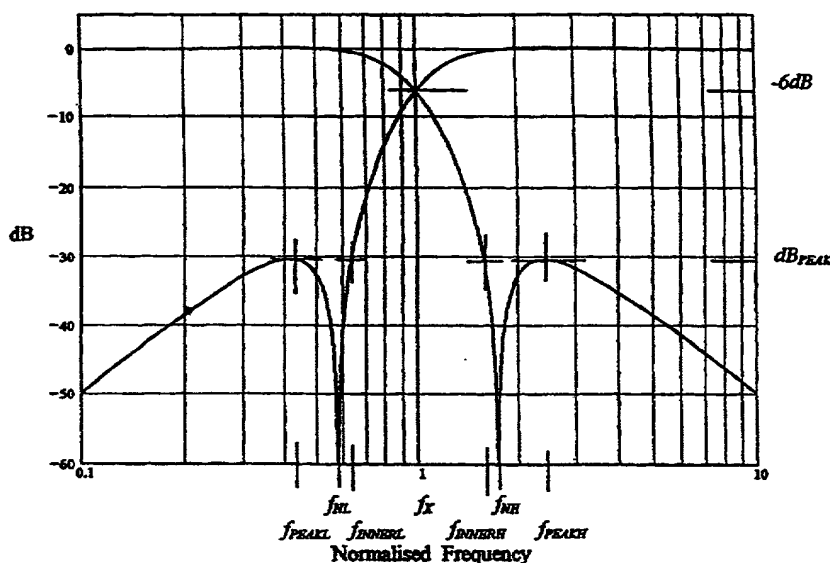
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(54) Title: IMPROVED CROSSOVER FILTERS AND METHOD

Normalised Frequency

(57) Abstract: An improved filter system is disclosed including a low pass filter having a response which rolls off towards a crossover frequency and a high pass filter having a complementary response which rolls off towards the crossover frequency. The responses are arranged such that the combined response of the filters is substantially constant in amplitude at least in the region of the crossover frequency. The response of the low pass filter is defined by a low pass complex transfer function having a first numerator and a first denominator. The response of the high pass filter is defined by a high pass complex transfer function having a second numerator and a second denominator. The desired response is obtained when the second denominator is substantially the same as the first denominator and the sum of the first and second numerators has substantially the same squared modulus as the first or second denominator.

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